FAA-E-2391
July 2, 1969

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION SPECIFICATION

TRANSMISSOMETER SUPPORT TOWER ASSEMBLY

1. SCOPE

1.1 Scope.- This specification covers a small free-standing, bolted steel tower, platform, shelves, pipe railing, and associated items for subsequent erection on a prepared foundation and to be used for the support of the transmissometer projector or receiver.

2. APPLICABLE DOCUMENTS

2.1 FAA documents.- The following FAA specification, standard and advisory circular of the issues specified in the invitation for bids on request for proposals, form a part of this specification.

2.1.1 FAA specification.-

FAA-D-1272 Instruction Booklets, Electronic Equipment

2.1.2 FAA standard.-

FAA-STD-013 Quality Control Program Requirements

2.1.3 FAA advisory circular.-

AC 150/5345-2 FAA Advisory Circular Specification for L-810 Obstruction light.

2.2 Military and Federal publications.- The following Military and Federal publications, of the issue in effect on the date of the invitation for bids or request for proposals, form a part of this specification.

2.2.1 Military specifications.-

MIL-P-116	Preservation, Methods of
MIL-C-104	Crates, Wood, Lumber and Plywood Sheathed
MIL-C-3774	Crates, Wood Open, Capacity (12,000 to 16,000 lbs.)

2.2.2 Military standard.-

MIL-STD-129	Marking for Shipment and Storage

2.2.3 Federal specifications.-

QQ-S-781	Strapping, Steel
WW-C-581	Conduit, Steel, Rigid Zinc Coated
PPP-B-601	Boxes, Wood Cleated Plywood
PPP-B-621	Boxes Wood Nailed and Lock Corner
PPP-B-636	Boxes, Fiberboard
PPP-C-650	Crates, Wood Open and Covered

2.2.4 Federal standard.-

Fed-Std-102	Preservation, Packaging and Packing Levels

2.3 Other publications.- The following publications, of the issue in effect on the date of the invitation for bids or the request for proposals, form a part of this specification.

ASTM-A36	Structural Steel
ASTM-A120	Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Ordinary Uses, Spec. for
ASTM-123	Hot Dip Galvanizing
ASTM-307	Low Carbon Steel Externally and Internally Threaded

(Copies of this specification and other applicable FAA documents may be obtained from the Contracting Officer in the Federal Aviation Administration Office issuing the invitation for bids or request for proposals. Requests should fully identify material desired, i.e., specification, standard, amendment, and circular number and dates. Requests should cite the invitation for bids, request for proposals, or the contract involved or other use to be made of the requested material.)

(Information on obtaining copies of Federal specifications and standards may be obtained from General Services Administration offices in Atlanta; Auburn, Wash.; Boston; Chicago; Denver; Fort Worth; Kansas City, Mo.; Los Angeles; New Orleans; New York; San Francisco; and Washington, D.C.)

(Single copies of Military specifications and standards may be obtained from Federal Aviation Administration, Washington, D.C. 20590, Attn: Contracting Officer. Requests should cite the invitation for bids, request

for proposals, or contract for which the material is needed. Mail requests, if found acceptable, will be forwarded to a Military supply depot for filling, hence, ample time should be allowed.)

(The ASTM publications may be obtained from the American Society for Testing Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.)

3. REQUIREMENTS

3.1 Construction.- The transmissometer supporting tower assembly shall be fabricated in accordance with the attached Drawings No. D-5855-6, -7, -8, and C-5855-9. The contractor shall furnish all items shown or indicated on the attached drawings. The assembly shall consist of the supporting tower, ladder, platform, railing, safety chain, shelves and assembly, obstruction lights and all the related accessories and hardware to provide a complete assembly. An excess of 10% over the actual number of bolts, washers, and nuts required to erect the tower shall be provided to take care of accidental loss or damage. The initial tower assembly of the contract shall be erected without foundation for inspection at the Contractor's Plant in the presence of the Government's representative. The parts and material shall conform to Drawing C-5855-9.

3.2 Materials

3.2.1 Tower platform and shelves.- The braces, supports and sheet metal shall conform to Specification ASTM-A36; it shall be new structural steel free from rust, scale, and imperfections. The hexagonal steel nuts, hexagonal head bolts, and washers shall conform to Specification ASTM-A307. The foundation anchor rods and eye bolts shall conform to Specification ASTM-A307.

3.2.2 Rail and fittings.- The pipe posts shall be "double extra strong" pipe and the rails shall be "standard weight" pipe conforming to Specification ASTM-A120. The conduit shall conform to Specification WW-C-581. The rail fittings shall be one-piece slip-fitting type with recessed set screws, to be tightened by means of a hexagonal wrench, to insure no injury to personnel. The fittings shall be of sufficient length that the set screws engage the pipe railing not less than 3/4-inch from the ends of the pipe. The plates to which the posts are welded shall conform to Specification ASTM-A36.

3.2.3 Personnel safety chain.- A guard chain shall be provided as a personnel safety device to close the access opening in the rail. It shall consist of a galvanized coil type chain of sufficient length to close the opening. The safe working load of the chain and attachments shall be not less than 550 pounds. A plated bolt type harness snap shall be attached to one end of the chain. The other end of the chain shall be attached to the center side of the rail opening by means of a galvanized eyebolt. A second galvanized eyebolt shall be attached to the corner pipe support of the railing. These eyebolts shall be mounted so as not to reduce the opening nor to provide protruding edges.

3.2.4 Obstruction light.- A dual medium screw base socket obstruction light meeting the requirements of Circular AC 150/5345-2 shall be furnished, complete with two multiple lamps, 116 watt, 120 volt, C-9 filament, A-21, clear bulb, medium screw base.

3.3 Assembly instructions and parts list.- The contractor shall provide in accordance with Specification FAA-D-1272, complete erection drawings and such instructions as are required for easy erection of the tower assembly by common labor. These drawings shall be based on piece marks (or numbers) stamped in the various members. Each drawing shall have a reference table showing number of pieces, size of each piece, and the referenced piece marks. These assembly instructions shall be printed on 8 by 10½-inch or 8½ by 11-inch white offset book paper. The contractor and Government inspector shall use the draft of these instructions for assembling the initial unit to determine the completeness and adequacy of the instructions. The parts list to be included in these instructions shall include everything detailed on Drawing C-5855-9. Two complete sets of the erection instructions and drawings shall be carefully packaged with each tower assembly in a manner to insure against loss or damage and in a readily accessible location; five sets of the inspection procedures, instructions and erection drawings shall be provided to the Contracting Officer for approval prior to production.

3.4 Finish.- All steel parts of the tower, ladder and railing shall be hot dip galvanized after fabrication in accordance with Specification ASTM-A123. All bolts, nuts and washers shall be cadmium plated or hot dip galvanized in accordance with Specification ASTM-A153.

3.5 Workmanship.- Workmanship shall be in accordance with high grade commercial practice for this type of equipment. All welds shall be carefully ground smooth, particularly those on the foot plates, to allow for close fitting of parts. Care shall be exercised in welding the two shelves to assure that they remain smooth and flat after fabrication. All holes shall be free from burrs. All sharp edges shall be removed from steel parts. Bolt holes shall be drilled or punched in such position in the members that there will be adequate clearance for use of a common type wrench for installing nuts or bolts inserted from the exterior. Holes for bolts connecting adjoining members shall line up accurately at assembly without necessity of drifting. Holes shall be punched or drilled 1/16-inch larger than the nominal bolt diameter. Adjoining members shall form tight, well fitting joints without introducing additional stresses when bolts are tightened. Washers shall be used where specified. Outside angles of all cross braces shall be cut at a 45 degree angle.

3.6 Nameplate.- Each tower shall be provided with a nameplate in accordance with Drawing B-21216.

4. QUALITY ASSURANCE PROVISIONS

4.1 Quality control requirements.- The contractor shall provide and maintain an inspection program in accordance with Standard FAA-STD-013.

4.2 Initial unit.- The contractor shall fabricate an initial unit of the tower. He shall notify the Contracting Officer sufficiently in advance of completion to allow for travel of an inspector to the contractor's plant. The Government Inspector will witness the complete assembly of the tower by the contractor's personnel. If acceptable, this tower will become one of the lot covered by the contract. In the event serious defects are discovered by the inspector, he will reject the tower unless modifications are made to correct the defects without sacrificing any performance characteristics required of the tower. Should the tower be rejected after being modified, a second model shall be fabricated correcting all defects noted in the first sample tower and the same procedure of testing shall be followed with the second sample tower.

4.3 Inspection.

4.3.1 Visual and dimensional.

4.3.1.1 Construction.- The supporting tower assembly shall be inspected for conformance with the contract drawings and for completeness of component parts including the specified excess of bolts, nuts and washers. After acceptance of the initial unit, it will not be required to assemble each tower.

4.3.1.2 Materials.- The component parts of the tower assembly shall be inspected for compliance with the individual material specifications. The various materials are steel, bolts, nuts and washers, pipe and conduit, platform and fittings, and obstruction lights.

4.3.1.3 Assembly instructions and parts list.- The Government inspector shall verify that the piece marking on the pieces agrees with the assembly instructions and also appears in the parts list. The two sets of assembly instructions should be clearly labeled and packaged so that they may be readily available. The inspector shall insure the assembly instructions are complete and adequate for a workman to follow without skilled supervision. Any lack of clarity in the instructions will be determined when the initial unit is assembled.

4.3.1.4 Finishing.- The braces, shelves, and other steel components shall be examined to determine the following: the galvanizing is adequate; it was done after all fabrication was complete; the coating has not been damaged in handling. The nuts, bolts, washers, anchor bolts, eyebolts shall all be examined for adequacy of finish.

4.3.1.5 Workmanship inspection.- The welds will be inspected for finish and cleaning prior to galvanizing. The shelves will be checked for fit and flatness. The fit and alignment of components including bolt clearances will be determined on the initial unit during assembly. All components will be inspected for the removal of sharp edges and the burring of holes prior to galvanizing.

5. PREPARATION FOR DELIVERY

5.1 General.- The Transmissometer Support Tower Assembly shall be prepared for delivery in accordance with the levels specified (see 6.2).

5.1.1 Requirements.- All components except the ladder shall be shipped unassembled, properly identified, and made ready for quick assembly in the field with the use of common tools. The obstruction light and lamps shall be packaged separately. A master packing list (itemized) shall accompany the shipment with a copy securely attached to the bill of lading indicating the number of pieces matched with the container in which each is placed. All boxes, bundles, crates, etc., of each support shall be marked indicating the number of the item and the total items of the complete support. All structural bulky parts, angle iron supports, platform, pipe railings, etc., shall be bundled as applicable, and strapped to a skidded platform to facilitate handling. Individual boxes, bundles, crates, etc., shall contain the same parts as like numbered items of a companion support. (Two supports comprise an operational set.)

5.1.2 Preservation and packaging.

5.1.2.1 Level A.- All structural tower parts shall be packaged Method III in accordance with the requirements of Specification MIL-P-116. The quantity of parts or assemblies per unit container shall be restricted to the weight and size limitations of the container selected. (See 5.1.3.1). The obstruction light and lamps shall be individually packaged Method III per Specification MIL-P-116. All small hardware parts, nuts, bolts, angle braces, reinforcement plates, etc., generally classified as mounting hardware, shall be boxed in wood containers conforming to Specification PPP-B-601 or PPP-B-621. (See 5.1.3.1). Two sets of instruction (installation) booklets shall be packaged Method ICI in accordance with Specification MIL-P-116. These shall be placed in a readily accessible location, preferably in the obstruction light and lamp box, and shall be indicated on the master packing list.

5.1.2.2 Level C.- In addition to the general requirements of paragraph 5.1.1, the support assembly shall be prepared for delivery in a manner that will afford adequate protection against corrosion, deterioration, and physical damage during shipment from supply source to the first receiving activity. This may conform to the suppliers commercial practice when such meets the requirements of this level.

5.1.3 Packing

5.1.3.1 Level A.- The Transmissometer Support Tower Assembly components, packaged as above shall be packed in shipping containers conforming to the requirements of the specification listed below. Closure shall be as prescribed in the applicable container specifications or appendix thereto.

PPP-B-601	Wood Cleated Plywood - Overseas Type
PPP-B-621	Wood, Nailed and Lock Corner - Overseas, Class 2
PPP-B-636	Fiberboard - Weather Resistant

PPP-C-650	Crates, Wood, Open and Covered
MIL-C-104	Crates, Wood, Lumber and Plywood Sheathed
MIL-C-3774	Crates, Wood, Open, Capacity (12,000 to 16,000 lbs.)

5.1.3.2 Level C.- The Transmissometer Support Tower Assembly components, preserved and packaged as above, shall be packed in containers acceptable to the common carrier which insures safe delivery to its first destination in a satisfactory condition at the lowest applicable rate. Suppliers commercial practice is acceptable provided these requirements are met and are in compliance with the Uniform Freight and National Motor Freight Classification Rules or Regulations dependent upon mode of transportation.

5.1.4 Marking.- In addition to any special marking specified herein, or by contract or order, all unit and exterior shipping containers shall be marked in accordance with the requirements of MIL-STD-129.

6. NOTES

6.1 Intended use.- This supporting tower is used to mount the transmissometer projector or receiver. The alignment is critical but must be corrected while in service, therefore the supporting tower must maintain the orientation of the instruments while the technician is servicing the instrument.

6.2 Ordering data.- Procurement documents should specify the following, along with any other necessary data as applicable, to be included by the preparing office.

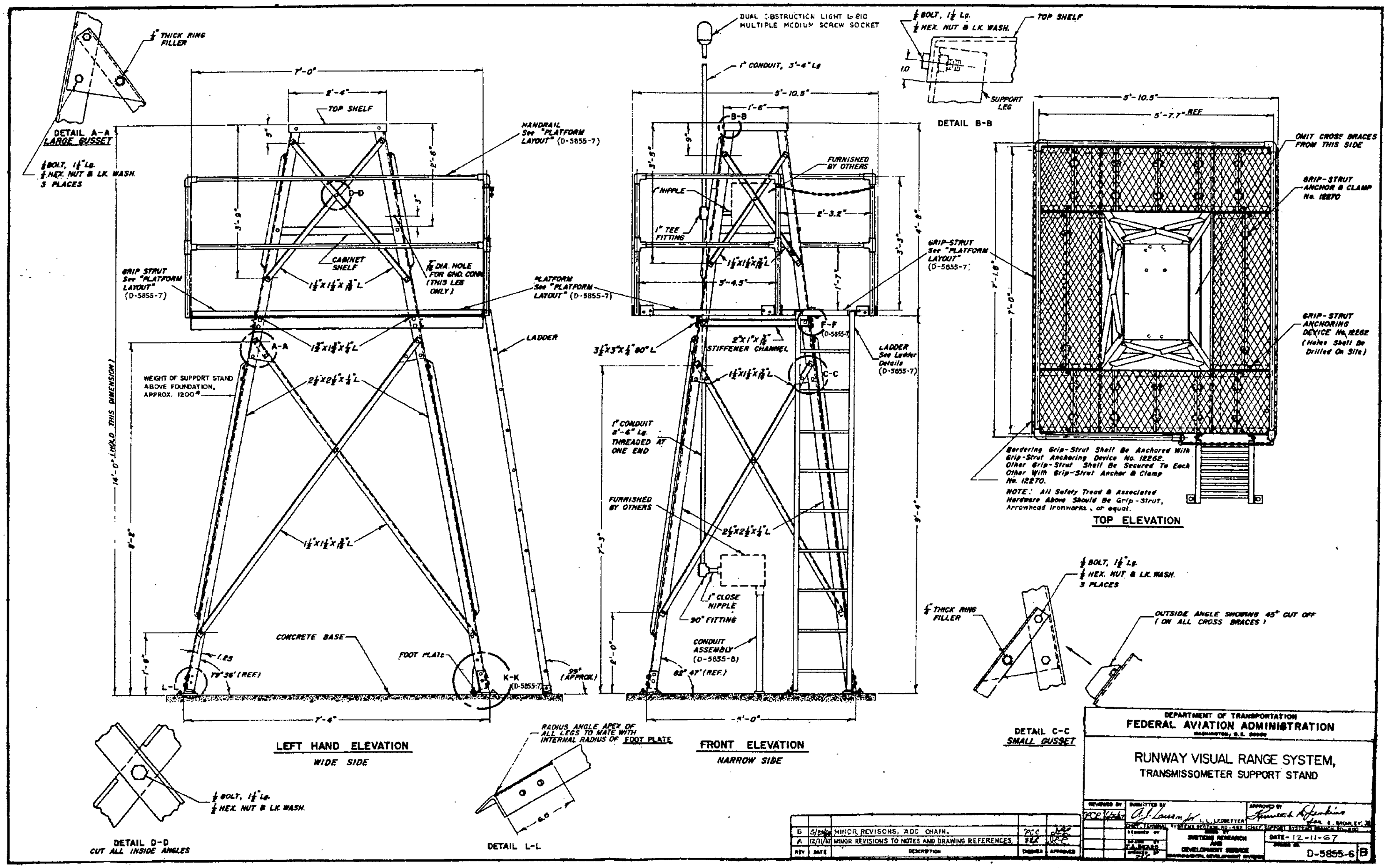
(a) Title, number and date of this specification.

(b) Levels of preservation, packaging and packing required and marking (see section 5).

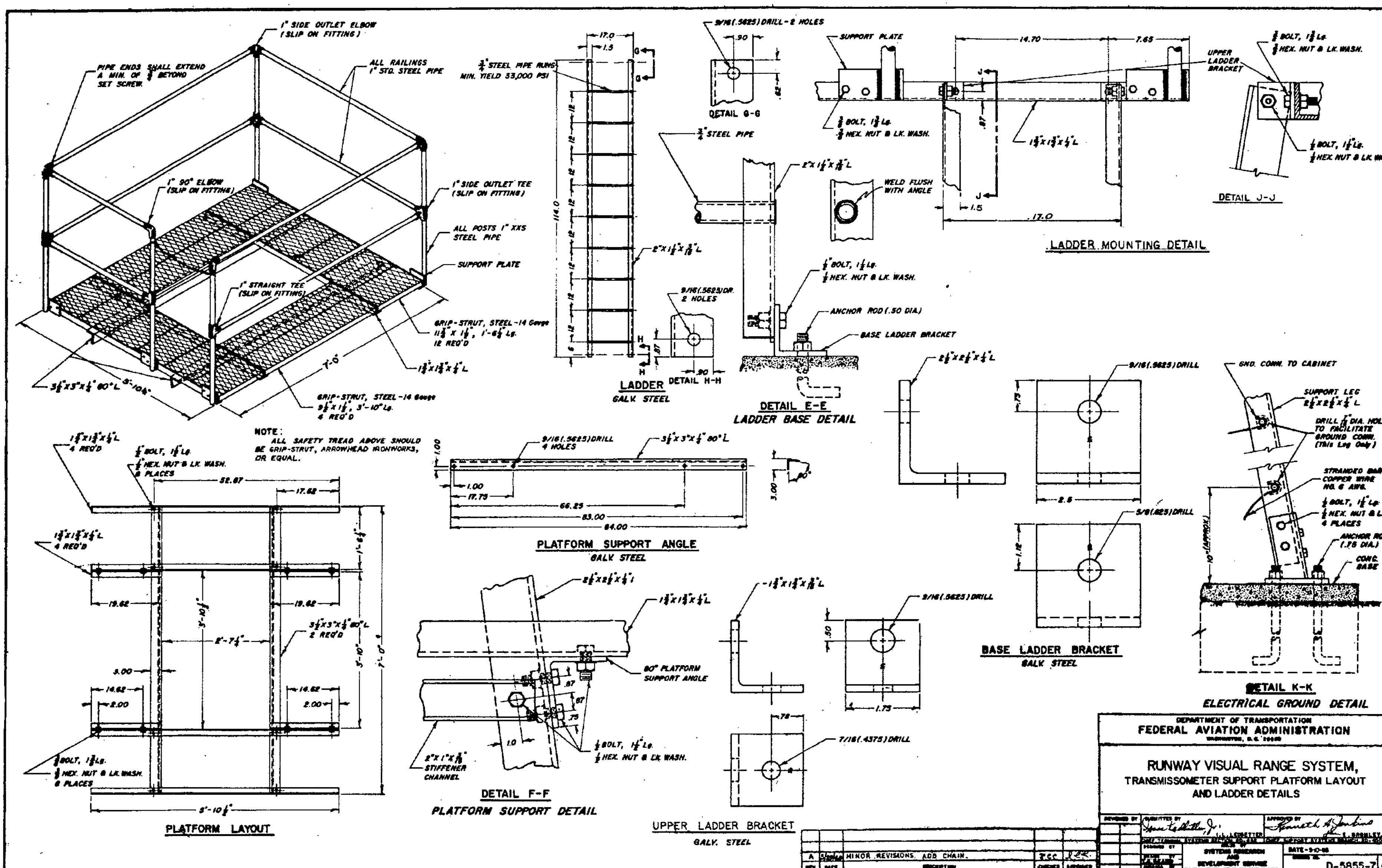
(c) Method of preservation and packaging (see 5.1.2.1).

* * * * *

ATTACH: Drawings D-5855-6, 7, 8; C-5855-9
Drawing B-21216K



DETAIL A-A
LARGE GUSSET
3/8" BOLT, 1 1/4" Lg.
3/8" HEX. NUT & LK. WASH.
3 PLACES
1/4" THICK RING FILLER
TOP SHELF
HANDRAIL See "PLATFORM LAYOUT" (D-5855-7)
CABINET SHELF
GRIP STRUT See "PLATFORM LAYOUT" (D-5855-7)
PLATFORM See "PLATFORM LAYOUT" (D-5855-7)
LADDER
WEIGHT OF SUPPORT STAND ABOVE FOUNDATION, APPROX. 1200#
14'-0" (HOLD THIS DIMENSION)
CONCRETE BASE
FOOT PLATE
LEFT HAND ELEVATION
WIDE SIDE
DETAIL D-D
CUT ALL INSIDE ANGLES
DETAIL L-L
RADIUS ANGLE APEX OF ALL LEGS TO MATE WITH INTERNAL RADIUS OF FOOT PLATE
DUAL OBSTRUCTION LIGHT L-810 MULTIPLE MEDIUM SCREW SOCKET
1" CONDUIT, 3'-4" Lg
FURNISHED BY OTHERS
1" NIPPLE
1" TEE FITTING
STIFFENER CHANNEL
1" CONDUIT 8'-6" Lg. THREADED AT ONE END
1" CLOSE NIPPLE
90° FITTING
CONDUIT ASSEMBLY (D-5855-8)
LADDER See Ladder Details (D-5855-7)
FRONT ELEVATION
NARROW SIDE
DETAIL B-B
SUPPORT LEG
OMIT CROSS BRACES FROM THIS SIDE
GRIP-STRUT ANCHOR & CLAMP No. 12270
GRIP-STRUT ANCHORING DEVICE No. 12262 (Holes Shall Be Drilled On Site)
Bordering Grip-Strut Shall Be Anchored With Grip-Strut Anchoring Device No. 12262. Other Grip-Strut Shall Be Secured To Each Other With Grip-Strut Anchor & Clamp No. 12270.
NOTE: All Safety Tread & Associated Hardware Above Should Be Grip-Strut, Arrowhead Ironworks, or equal.
TOP ELEVATION
DETAIL C-C
SMALL GUSSET
OUTSIDE ANGLE SHOWING 45° CUT OFF (ON ALL CROSS BRACES)
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RUNWAY VISUAL RANGE SYSTEM,
TRANSMISSOMETER SUPPORT STAND
B MINOR REVISONS, ADD CHAIN.
A 12/11/67 MINOR REVISIONS TO NOTES AND DRAWING REFERENCES.
SYSTEMS RESEARCH AND DEVELOPMENT SERVICE
DATE - 12-11-67
D-5855-6 B

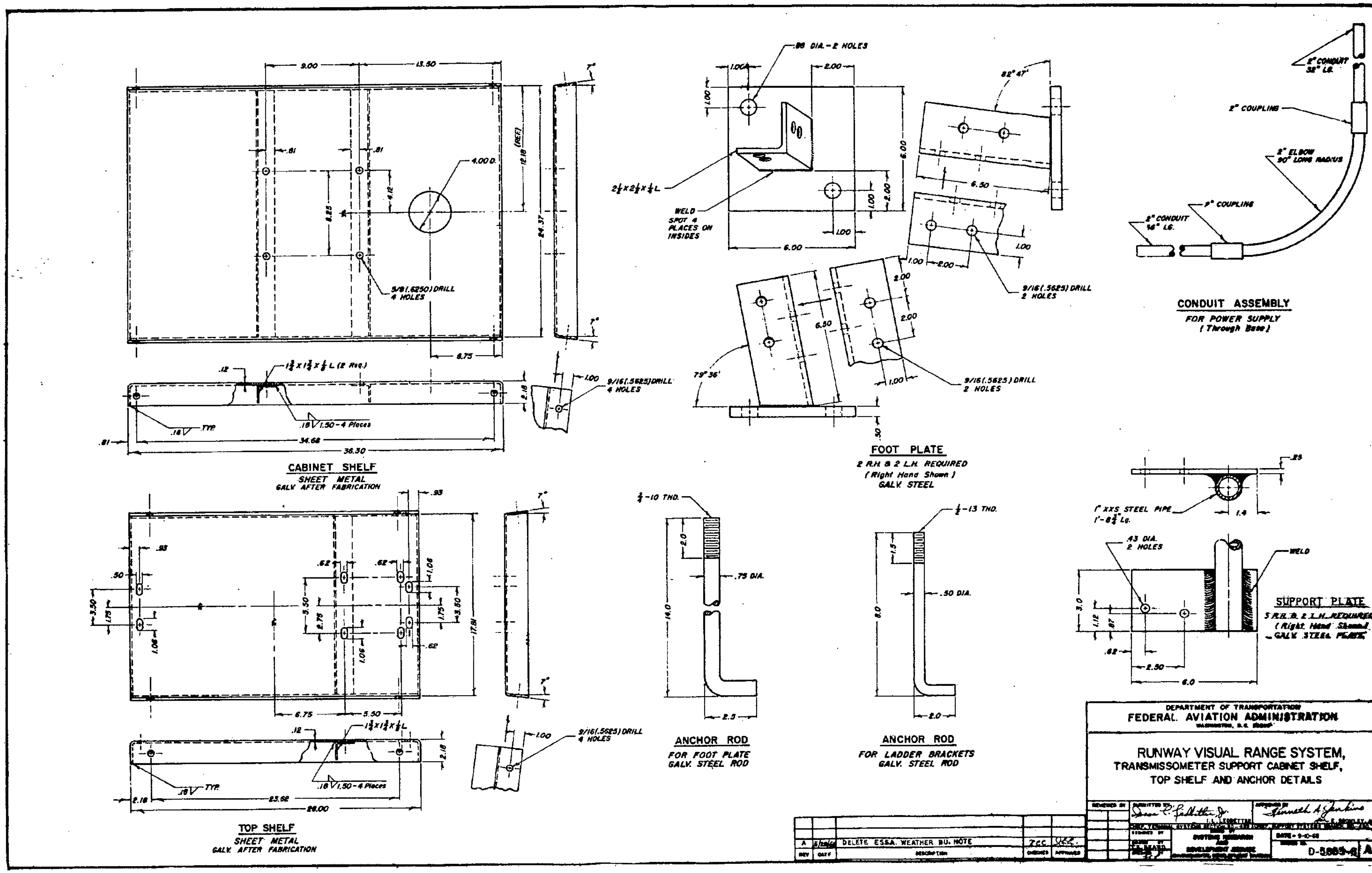


DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

RUNWAY VISUAL RANGE SYSTEM,
TRANSMISSOMETER SUPPORT PLATFORM LAYOUT
AND LADDER DETAILS

REV	DATE	DESCRIPTION	CHECKED	APPROVED
A		MINOR REVISIONS, ADD CHAIN.		

D-5855-7 A

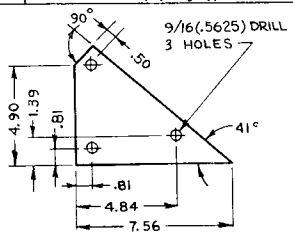

CABINET SHELF
SHEET METAL
GALV. AFTER FABRICATION
5/8 (.6250) DRILL 4 HOLES
4.00 D.
12.18 (REF)
24.37
9.00
13.50
6.75
$1\frac{3}{4} \times 1\frac{3}{4} \times \frac{1}{8}$ L (2 Req.)
.18 V 1.50-4 Places
.18 V TYP.
34.68
36.30
9/16 (.5625) DRILL 4 HOLES
TOP SHELF
SHEET METAL
GALV. AFTER FABRICATION
$1\frac{3}{4} \times 1\frac{3}{4} \times \frac{1}{8}$ L
23.62
26.00
17.81
FOOT PLATE
2 R.H. & 2 L.H. REQUIRED
(Right Hand Shown)
GALV. STEEL
.86 DIA.-2 HOLES
$2\frac{1}{2} \times 2\frac{1}{2} \times \frac{1}{4}$ L
WELD SPOT 4 PLACES ON INSIDES
82° 47'
79° 36'
9/16 (.5625) DRILL 2 HOLES
ANCHOR ROD
FOR FOOT PLATE
GALV. STEEL ROD
$\frac{3}{4}$-10 THD.
.75 DIA.
ANCHOR ROD
FOR LADDER BRACKETS
GALV. STEEL ROD
$\frac{1}{2}$-13 THD.
.50 DIA.
CONDUIT ASSEMBLY
FOR POWER SUPPLY
(Through Base)
2" CONDUIT 32" LG.
2" COUPLING
2" ELBOW 90° LONG RADIUS
2" CONDUIT 36" LG.
SUPPORT PLATE
2 R.H. & 2 L.H. REQUIRED
(Right Hand Shown)
GALV. STEEL PLATE
1" XXS STEEL PIPE 1'-8 3/4" Lg.
.43 DIA. 2 HOLES
WELD
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C.
RUNWAY VISUAL RANGE SYSTEM,
TRANSMISSOMETER SUPPORT CABINET SHELF,
TOP SHELF AND ANCHOR DETAILS
A DELETE ESSA WEATHER BU. NOTE
REV DATE DESCRIPTION CHECKED APPROVED
SYSTEMS RESEARCH AND DEVELOPMENT SERVICE
DATE 9-10-68
D-5869-8 A

BILL OF MATERIAL

Qty	Description	Size Of Material	Finish	Spec.	Remarks
4	Support Leg	$2\frac{1}{2}$"X$2\frac{1}{2}$"X$\frac{1}{4}$"L, 14'-$\frac{1}{2}$" Lg.	Galv.	ASTM A-36	Left Front Leg With Holes Drilled For 2 Gnd. Connections
4	FOOT PLATE	See sheet 8			2 Right Hand, 2 Left Hand
4	Angle For Lower Cross Brace (wide side of support)	$1\frac{1}{2}$"X$1\frac{1}{2}$"X$\frac{3}{16}$"L, 8'-7" Lg.			
4	Angle For Lower Cross Brace (narrow side of support)	$1\frac{1}{2}$"X$1\frac{1}{2}$"X$\frac{3}{16}$"L, 6'-6" Lg.			
2	Angle For Upper Cross Brace (wide side of support)	$1\frac{1}{2}$"X$1\frac{1}{2}$"X$\frac{3}{16}$"L, 4'-5"Lg.			1 Angle Cut Out At Point Of Cross. (see Detail D-D, sheet 6)
4	Angle For Upper Cross Brace (narrow side of support)	$1\frac{1}{2}$"X$1\frac{1}{2}$"X$\frac{3}{16}$"L, 3'-3"Lg.			2 Angles Cut Out At Point Of Cross.(see Detail D-D, sheet 6)
4	LARGE GUSSET PLATE	$\frac{3}{16}$" Steel			For Wide Side Of Support (see detail below)
4	SMALL GUSSET PLATE	$\frac{3}{16}$" Steel			For Narrow Side Of Support (see detail below)
8	Filler Ring	$\frac{1}{4}$" Steel			Clearance Hole For $\frac{1}{4}$ Bolt
2	Stiffener Channel	2"X1"X$\frac{3}{16}$" Channel, 2'-7" Lg.		A-36	
2	PLATFORM SUPPORT ANGLE	$3\frac{1}{2}$"X3"X$\frac{1}{4}$"L, 7'-0"Lg.			Bend To 80° Angle
1	TOP SHELF	See sheet 8			
1	CABINET SHELF	See sheet 8			
8	ANCHOR ROD (with nut)	.75 Dia. Steel		A-307	See sheet 8
4	Platform Retainer Angle	$1\frac{1}{2}$"X$1\frac{1}{2}$"X$\frac{1}{4}$"L, 5'-10" Lg.		A-36	See "PLATFORM LAYOUT" (sheet 7)
4	Platform Retainer Angle	$1\frac{1}{2}$"X$1\frac{1}{2}$"X$\frac{1}{4}$"L, 19.5"Lg.			
12	Grip-Strut Platform Panel	$11\frac{3}{4}$"X$1\frac{1}{2}$", 1'-$6\frac{1}{4}$" Lg. 14 Gauge Steel			
4	Grip-Strut Platform Panel	$9\frac{1}{2}$"X$1\frac{1}{2}$", 3'-10" Lg. 14 Gauge Steel			
5	Pipe Post, Lower	1"XXS Steel Pipe, 3'-$3\frac{3}{4}$" Lg.		A-120	
2	Pipe Railing (for front of support)	1" STD Steel Pipe, 3'-$2\frac{1}{2}$" Lg.			
2	Pipe Railing (for rear of support)	1" STD Steel Pipe, 5'-$5\frac{1}{4}$" Lg.			
4	Pipe Railing (for wide side of support)	1" STD Steel Pipe, 6'-$11\frac{3}{4}$" Lg.			
3	Side Outlet Elbow	For 1" Pipe			
3	Side Outlet Tee	For 1" Pipe			
2	90° Elbow	For 1" Pipe			
2	Straight Tee	For 1" Pipe			
5	SUPPORT PLATE	See sheet 8		A-36	3 Right Hand, 2 Left Hand
26	Grip-Strut Anchor & Clamp Assy	For $1\frac{1}{2}$" Grip-Strut Channel			Grip Strut No. 12270 (10% over actual requirement)
26	Grip-Strut Anchoring Device				Grip-Strut No. 12262 (10% over actual requirement)
1	LADDER			A-36	See "LADDER" (sheet 7)
2	BASE LADDER BRACKET	$2\frac{1}{2}$"X$2\frac{1}{2}$"X$\frac{1}{4}$"L, $2\frac{1}{2}$" Lg.			See sheet 7
2	UPPER LADDER BRACKET	$1\frac{1}{4}$"X$1\frac{1}{4}$"X$\frac{3}{16}$"L, $1\frac{1}{4}$" Lg.			See sheet 7
2	ANCHOR ROD (with nut)	.50 Dia. Steel		A-307	See sheet 8
1	Conduit	2" Steel Conduit, 32" Lg.		WW-C-581	Threaded Both Ends See "CONDUIT ASSY"(sheet 8)
1	Conduit	2" Steel Conduit, 36" Lg.			Threaded One End See "CONDUIT ASSY"(sheet 8)
1	Long Bend Conduit Elbow	2" Steel Conduit			Min. Radius 15", Max. Radius 18" Threaded Both Ends See "CONDUIT ASSY"(sheet 8)
2	Conduit Coupling	For 2" Conduit			See "CONDUIT ASSY"(sheet 8)
1	Nipple	For 1" Fitting, 7.5"Lg.			Threaded Both Ends. See "FRONT ELEVATION"(sheet 6)
1	Close Nipple	For 1" Fitting			See "FRONT ELEV."(sheet 6)
1	Conduit	1" Conduit, 3'-4" Lg.			Threaded Both Ends See "FRONT ELEV."(sheet 6)
1	Conduit	1" Conduit, 8'-6" Lg.			Threaded One End See "FRONT ELEV."(sheet 6)

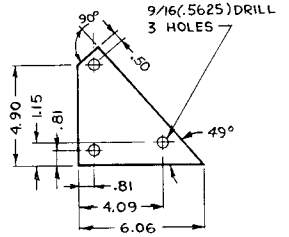
BILL OF MATERIAL

Qty	Description	Size Of Material	Finish	Spec.	Remarks
1	Tee Fitting (electrical, back cover & gasket)	For 1" Fitting	Galv		See "FRONT ELEV."(sheet 6) Crouse-Hinds No. TB37
1	90° Fitting (electrical, back cover & gasket)	For 1" Fitting			See "FRONT ELEV."(sheet 6) Crouse-Hinds No. LB37
2	Electrical Ground Connector	$1\frac{1}{8}$"X$1\frac{1}{8}$"			Cable To Flat Surface Type With Looped Groove To Clamp Wire Connector 3/8" Bronze Bolt & Lk. Wash. O-Z Electrical Mfg Co. Gnd. Conn. No. QGO! For No. 6 AWG Stranded Wire See Detail K-K (sheet 7)
1	Electrical Ground Clamp	Fits $\frac{5}{8}$" Gnd Rod			Bronze, Heavy Duty, Pressure Type Tightened By Set Screw See Detail K-K (sheet 7)
1	Ground Rod	$\frac{5}{8}$" Dia. Steel Rod, 8' Lg.	Copper		See Detail K-K (sheet 7)
1	Ground Wire	No. 6 AWG, 9' Lg.			Bare Copper Wire See Detail K-K (sheet 7)
1	Obstruction Light				Dual Type With Bottom Entry L-810. See "FRONT ELEV." (sheet 6)
2	Lamp (for obstruction light)	116 Watt, 120 Volt			
109	1/2" Hex. Head Bolt	$1\frac{1}{2}$" Lg., Steel	Galv.	A-307	10% over actual requirement
109	1/2" Hex. Nut	Steel			
26	3/8" Hex. Head Bolt	$1\frac{1}{4}$" Lg., Steel			
26	3/8" Hex. Nut	Steel			
109	1/2" Lockwasher (spring type)	Steel			
26	3/8" Lockwasher (spring type)	Steel			
26	5/16"-18 CRG Bolt (see note 2)	$2\frac{1}{4}$" Lg., Steel			
26	5/16"-18 Hex. Nut (see note 2)	Steel			
26	5/16" Flat Washer (see note 2)	Steel			
2	1/4" Eyebolt	Steel			
2	1/4" Hex. Nut	Steel			
2	1/4" Lockwasher (spring type)	Steel			



LARGE GUSSET PLATE

3/16 GALV. STEEL



SMALL GUSSET PLATE

3/16 GALV. STEEL

NOTES:

1. ALL ITEMS LISTED ABOVE SHOULD BE MANUFACTURER SHOWN OR EQUAL.
2. THIS HARDWARE USED WITH GRIP-STRUT ANCHORING DEVICE.

REV.LTR	DATE	DESCRIPTION	CHECKED	APPROVED
A	5 JUNE-69	REDRAWN & MINOR CHANGES	ACC	LLL

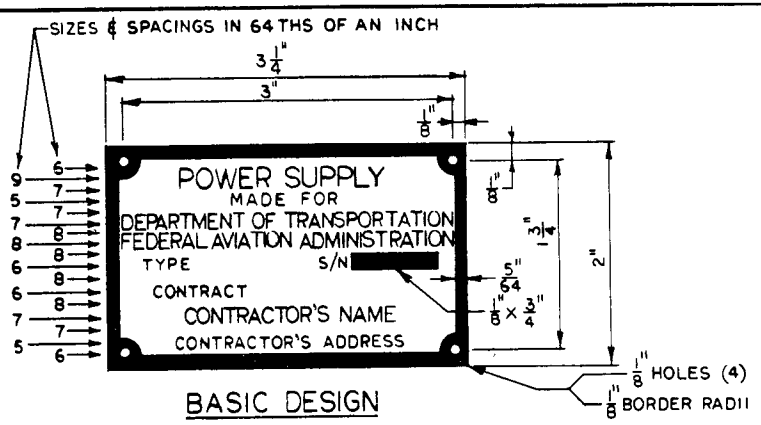
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C. 20590

TRANSMISSOMETER SUPPORT

REVIEWED BY	SUBMITTED BY	APPROVED BY
P.C.C. 6469	Isaac L. Ledbetter Jr. I.L. LEDBETTER, CHIEF, TERMINAL SYSTEMS SECTION RD-452	Edmund Bromley E. BROMLEY JR., CHIEF, SUPPORT SYSTEMS BRANCH RD-450

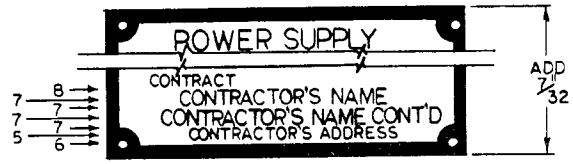
DESIGNED BY	ISSUED BY	DATE	REV. LTR.
DRAWN BY TOM A. BEARD	SYSTEMS RESEARCH AND DEVELOPMENT SERVICE, ENVIRONMENTAL DEVELOPMENT DIVISION	6-5-69	A
CHECKED BY	DRAWING NO. C-5855-9		

GPO 928-230



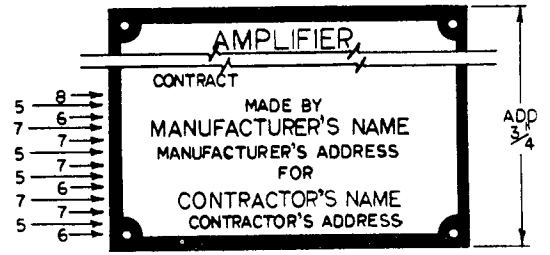
BASIC DESIGN

SINGLE-LINE EQUIPMENT TITLE AND CONTRACTOR'S NAME; NO SUB-CONTRACTOR



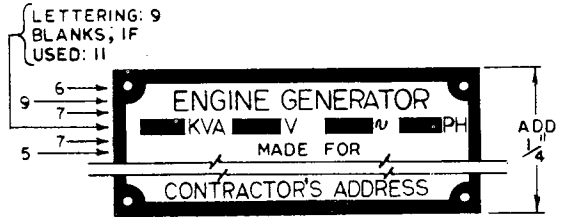
TWO LINES FOR CONTRACTOR'S NAME

INCREASE HEIGHT OF BASIC DESIGN BY 7/32"



EQUIPMENT MADE BY SUB-CONTRACTOR

INCREASE HEIGHT OF BASIC DESIGN BY 3/4"



TWO-LINE EQUIPMENT TITLE

INCREASE HEIGHT OF BASIC DESIGN BY 1/4"

NOTES:

1. ACCEPTABLE MATERIALS:
   0.03 INCH MIN. ALUMINUM WITH OVERALL WATER-DIP LACQUER (PROHIBITED ON ENGINE GENERATORS AND EQUIPMENT INSTALLED OUT OF DOORS).
   OR 0.03 INCH NICKEL SILVER (ANY USE).
   PROCESS FOR BOTH OF ABOVE: REVERSE ETCHED; THE FOLLOWING TO BE RAISED, WITH DULL METAL FINISH: BORDER, SERIAL NUMBER AND RATING DATA BLANKS, ALSO ALL LETTERS AND NUMBERS EXCEPT SERIAL NUMBER; DEPRESSED BACKGROUND FINISHED IN BLACK ENAMEL.
   OR 0.02 INCH MINIMUM PHOTOSENSITIVE ANODIZED ALUMINUM PROCESSED FOR WHITE METAL CHARACTERS WITH JET BLACK BACKGROUND; PHOTOSENSITIVE SILVER COMPOUNDS SHALL BE IMBEDDED WITHIN THE OXIDE LAYER, AND IMAGE SHALL BE SEALED IN OXIDE LAYER BY CHEMICAL TREATMENT (ANY USE EXCEPT PROHIBITED ON ENGINE GENERATORS).
2. SERIAL NUMBER: ENGRAVE OR DIE STAMP. ALSO APPLIES WHERE BLANKS ARE USED FOR RATING DATA (SEE TWO-LINE TITLE).
3. IF NO CONTRACT NUMBER, SUBSTITUTE "ORDER NO." FOR "CONTRACT"
4. NAMEPLATE SIZE MAY BE REDUCED WHERE MOUNTING SPACE IS LIMITED, ALL DIMENSIONS AND LETTER SIZES SHALL BE REDUCED APPROXIMATELY IN PROPORTION, EXCEPT THAT HOLE SIZE, HOLE CORNER DIMENSIONS, AND MARGINAL RADII, SHALL REMAIN 1/8 INCH.
5. EQUIPMENT TITLE, TYPE DESIGNATION, AND SERIAL NUMBERS, WILL BE FURNISHED BY GOV'T. AFTER AWARD OF CONTRACT.
6. TOLERANCE ON DIMENSIONS ±0.010 INCH, EXCEPT HOLE SIZE AND HOLE-TO-HOLE SPACING ±0.005 INCH.
7. SUBCONTRACTOR NAMEPLATE DESIGN IS MANDATORY WHERE EQUIPMENT IS MANUFACTURED BY SUBCONTRACTOR.
8. CHARACTER GROUPS TO BE CENTERED.
9. CONDENSED TYPE MAY BE USED.

REV. LTR	DATE	DESCRIPTION	CHECKED	APPROVED
K	3/11/69	REDRAWN, SUPERSEDES DRAWING B-21216 M; 4/20/67	[illegible]	[illegible]

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C. 20590

STANDARD NAMEPLATE

REVIEWED BY	[illegible] RD-424, RD-423
SUBMITTED BY	CHIEF, ELECTRONICS STANDARDS SEC, RD-424; CHIEF, ENVIRONMENTAL STANDARDS SEC RD-423
APPROVED BY	[illegible]
DESIGNED BY	CHIEF, SYSTEMS STANDARDS BRANCH RD-420
DRAWN BY	TOM-ALVA-BEARD
CHECKED BY	[illegible] 3/24/69
ISSUED BY	SYSTEMS RESEARCH AND DEVELOPMENT SERVICE, ENVIRONMENTAL DEVELOPMENT DIVISION
DATE	3-24-69
DRAWING NO.	B-21216
REV LTR	K

GPO 872 838